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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,113	05/31/2001	Harald Michi	10191/1775	9218

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EXAMINER

NGUYEN, THU V

ART UNIT

PAPER NUMBER

3661

DATE MAILED: 06/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/857,113

Applicant(s)

MICH I ET AL.

Examiner

Thu Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

The argument filed on March 21, 2003 has been entered. Claims 15-30 are pending in the application. A new ground of rejection on the pending claims followed:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al (US 5,841,366) in view of Izumi et al (US 5,648,905).

As per claim 15-18, 21-23, 25-30, Yamamoto teaches a method for determining a future travel path of a first vehicle equipped with a distance sensor in which a relative position of a second vehicle is determined using the distance sensor (col.5, lines 51-56). Yamamoto does not explicitly teach determining the course path of the second vehicle, determining the future travel path and projecting the course path in direction of a position of the first vehicle. However, Yamamoto teaches determining the future travel path of the first vehicle in the direction of the first vehicle (col.6, lines 13-27), further, since Yamamoto teaches that the future travel path is

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determined based on the minimal distance between the second vehicle and the future travel path (col.5, lines 51-67; col.6, lines 13-27), and since when the distance between the second vehicle and the future travel path is minimal ($d_{11S4} - d'_{11S4} = 0$, etc) the future travel path is the course path of the second vehicle, Yamamoto obviously teach determining the future travel path as a function of the course path of the second vehicle with the course path of the second vehicle is generated at the first vehicle. Moreover, Izumi teaches determining the course path of the second vehicle in the direction of the second vehicle (col.6, lines 23-26). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to project the future travel path of the second vehicle in the direction of travel of the first vehicle after the course path has been determined since selecting an origin of direction at which the future path is calculated, and moving the course path to another origin of direction requires only routine skill in the art.

As per claim 19-20, Izumi teaches filtering out the lane change of the second vehicle using comparison (col.7, lines 58-67; col.8, lines 1-28). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to filter out the second vehicle that has changed the lane in order to determine the distance of the first vehicle to the most relevant second vehicle that is in the lane of the first vehicle.

As per claim 24, using the ring memory to store first in first out data (FIFO) would have been well known.

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Response to Arguments

3. Applicant's arguments with respect to claims 15-17, 26, 28-30 have been considered but are moot in view of the new ground(s) of rejection.

The indicated allowable subject matter has been withdrawn in view of the newly found references.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 305-7687, (for formal communications intended for entry)

Or:

(703) 305-7687 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451 Crystal Drive,
Arlington, VA., Seventh Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner can normally be reached on Monday-Thursday from 8:00 am to 6:00 pm ET.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski, can be reached on (703) 308-3873. The fax phone number for this Group is (703)305-7687 .

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)308-1111.

A handwritten signature in black ink, appearing to read "Thu Nguyen", with a horizontal line underneath the name.

Thu Nguyen

June 5, 2003